10/762,735

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	22969	(707/1-6,10).CCLS.	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	OFF	2007/04/24 19:05
L2	471	"query execution plan"	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:05
L3	2	"query execution plan" and "constraint rule"	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:06
L4	1739	((query same execution same plan) or qep)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:06
L5	0	((query same execution same plan) or qep) and (contraint same rule$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:07
L6	60	((query same execution same plan) or qep) and (constraint same rule$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:07
L7	56	((query same execution same plan) or qep) and (constraint same rule$1)and (table$1 nd column$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:07
L8	48	((query same execution same plan) or qep) and (constraint same rule$1)and (table$1 and column$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:08

EAST Search History

L9	16	((query same execution same plan) or qep) and (constraint same rule$1)and (table$1 and column$1)and (constraint near value$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:08
L10	15	((query same execution same plan) or qep) and (constraint same rule$1)and (table$1 and column$1)and (constraint near value$1) and constant$1	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:09
L11	22977	((query same execution same plan) or qep) and (constraint same rule$1)and (constraint near value$1) 1	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:12
L12	17	((query same execution same plan) or qep) and (constraint same rule$1) and (constraint near value$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:10
L13	0	((query same execution same plan) or qep) and (constraint same rule$1) and (constraint near value$1)and abort	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:10
L14	0	((query same execution same plan) or qep) and (constraint same rule$1) and (constraint near value$1)and (abort or roll near back)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:11
L15	0	((query same execution same plan) or qep) and (constraint same rule$1) and (constraint near value$1)and (abort or roll near back)and (derived near constraint near rule$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:12
L16	0	((query same execution same plan) or qep) and (constraint same rule$1) and (constraint near value$1)and (abort or roll near back)and (query nera optimiz$6)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:12

EAST Search History

L17	3	((query same execution same plan) or qep) and (constraint same rule$1)and (constraint near value$1) and (query near optimiz$7)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:19
L18	840	((query same execution same plan) or qep) and (query near optimiz$7)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:20
L19	76	derived with constraint with rule$1	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:14
L20	1	18 and 19	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:14
L21	1	derived with constraint with rule$1 and (query near execution near plan)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:15
L22	11	constraint with rule$1 and (query near execution near plan)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:16
L23	110	constraint and rules and (qep or (query near execution near plan))	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:20
L24	41	constraint and rules and (qep or (query near execution near plan)) and ((primary or foreign) near key$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:17

EAST Search History

L25	41	constraint and rules and (qep or (query near execution near plan)) and ((primary or foreign) near key$1)and table$1	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:20
L26	38	constraint and rules and (qep or (query near execution near plan)) and ((primary or foreign) near key$1)and table$1 and columns	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:17
L27	38	constraint and rules and (qep or (query near execution near plan)) and ((primary or foreign) near key$1)and table$1 and columns and values	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:18
L28	5	constraint and rules and (qep or (query near execution near plan)) and ((primary or foreign) near key$1)and table$1 and columns and values and (correlated near value$1)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:18
L29	3	1 and ((query same execution same plan) or qep) and (constraint same rule$1)and (constraint near value$1) and (query near optimiz$7)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:19
L30	38	1 and constraint and rules and (qep or (query near execution near plan)) and ((primary or foreign) near key$1)and table$1	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:20
L31	89	1 and constraint and rules and (qep or (query near execution near plan))	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:20
L32	612	1 and ((query same execution same plan) or qep) and (query near optimiz$7)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2007/04/24 19:20

Terms used **qep** or **query** and **execution** and **plan** or **query execution plan**

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Relevance scale

1 Query optimization in the presence of limited access patterns

Daniela Florescu, Alon Levy, Ioana Manolescu, Dan Suciu

June 1999 **ACM SIGMOD Record , Proceedings of the 1999 ACM SIGMOD international conference on Management of data SIGMOD '99**, Volume 28 Issue 2

Publisher: ACM Press

Full text available: pdf(1.66 MB) Additional Information: full citation, abstract, references, citings, index terms

We consider the problem of query optimization in the presence of limitations on access patterns to the data (i.e., when one must provide values for one of the attributes of a relation in order to obtain tuples). We show that in the presence of limited access patterns we must search a space of annotated query plans, where the annotations describe the inputs that must be given to the plan. We describe a theoretical and experimental analysis of the resulting search space and a ...

2 Research sessions: query optimization: Robust query processing through progressive optimization

Volker Markl, Vijayshankar Raman, David Simmen, Guy Lohman, Hamid Pirahesh, Miso Cilimdzic

June 2004 **Proceedings of the 2004 ACM SIGMOD international conference on Management of data SIGMOD '04**

Publisher: ACM Press

Full text available: pdf(331.15 KB) Additional Information: full citation, abstract, references, citings

Virtually every commercial query optimizer chooses the best plan for a query using a cost model that relies heavily on accurate cardinality estimation. Cardinality estimation errors can occur due to the use of inaccurate statistics, invalid assumptions about attribute independence, parameter markers, and so on. Cardinality estimation errors may cause the optimizer to choose a sub-optimal plan. We present an approach to query processing that is extremely robust because it is able to detect and re ...

3 ObjectGlobe: Ubiquitous query processing on the Internet

R. Braumandl, M. Keidl, A. Kemper, D. Kossmann, A. Kreutz, S. Seltzsam, K. Stocker

August 2001 **The VLDB Journal — The International Journal on Very Large Data Bases**, Volume 10 Issue 1

Publisher: Springer-Verlag New York, Inc.

Full text available: pdf(251.44 KB) Additional Information: full citation, abstract, citings, index terms

Terms used **qep** or **query** and **execution** and **plan** or **query execution plan** and

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Relevance scale

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August 2001 **The VLDB Journal — The International Journal on Very Large Data Bases**, Volume 10 Issue 1

Publisher: Springer-

Terms used **qep** or **query** and **execution** and **plan** or **query execution plan** and **contraint** and **rules** and

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1 ObjectGlobe: Ubiquitous query processing on the Internet

R. Braumandl, M. Keidl, A. Kemper, D. Kossmann, A. Kreutz, S. Seltzsam, K. Stocker

August 2001 **The VLDB Journal — The International Journal on Very Large Data Bases**, Volume 10 Issue 1

Publisher: Springer-Verlag New York, Inc.

Full text available: pdf(251.44 KB) Additional Information: full citation, abstract, citings, index terms

We present the design of ObjectGlobe, a distributed and open query processor for Internet data sources. Today, data is published on the Internet via Web servers which have, if at all, very localized query processing capabilities. The goal of the ObjectGlobe project is to establish an open marketplace in which *data* and *query processing capabilities* can be distributed and used by any kind of Internet application. Furthermore, ObjectGlobe integrates *cycle providers* (i.e., machi ...

Keywords: Cycle-, function- and data provider, Distributed query processing, Open systems, Privacy, Quality of service, Query optimization, Security

2 Query optimization in the presence of limited access patterns

Daniela Florescu, Alon Levy, Ioana Manolescu, Dan Suciu

June 1999 **ACM SIGMOD Record , Proceedings of the 1999 ACM SIGMOD international conference on Management of data SIGMOD '99**, Volume 28 Issue 2

Publisher: ACM Press

Full text available: pdf(1.66 MB) Additional Information: full citation, abstract, references, citings, index terms

We consider the problem of query optimization in the presence of limitations on access patterns to the data (i.e., when one must provide values for one of the attributes of a relation in order to obtain tuples). We show that in the presence of limited access patterns we must search a space of annotated query plans, where the annotations describe the inputs that must be given to the plan. We describe a theoretical and experimental analysis of the resulting search space and a ...

3 DB integration: Processing frequent itemset discovery queries by division and set containment join operators

Ralf Rantzau

June 2003 **Proceedings of the 8th ACM SIGMOD workshop on Research issues in data**

Terms used
derived and **constraint** and **rules** and **qep** or **query** and **execution** and **plan** or **query execution plan** and **tables** and **columns** and **contraint** and **rules** and

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1 Query evaluation techniques for large databases

Goetz Graefe
June 1993 **ACM Computing Surveys (CSUR)**, Volume 25 Issue 2
Publisher: ACM Press

Full text available: pdf(9.37 MB) Additional Information: full citation, abstract, references, citings, index terms, review

Database management systems will continue to manage large data volumes. Thus, efficient algorithms for accessing and manipulating large sets and sequences will be required to provide acceptable performance. The advent of object-oriented and extensible database systems will not solve this problem. On the contrary, modern data models exacerbate the problem: In order to manipulate large sets of complex objects as efficiently as today's database systems manipulate simple records, query-processi ...

Keywords: complex query evaluation plans, dynamic query evaluation plans, extensible database systems, iterators, object-oriented database systems, operator model of parallelization, parallel algorithms, relational database systems, set-matching algorithms, sort-hash duality

2 Consistent selectivity estimation via maximum entropy

V. Markl, P. J. Haas, M. Kutsch, N. Megiddo, U. Srivastava, T. M. Tran
October 2006 **The VLDB Journal — The International Journal on Very Large Data Bases**, Volume 16 Issue 1
Publisher: Springer-Verlag New York, Inc.
Full text available: pdf(737.08 KB) Additional Information: full citation, abstract, index terms

Cost-based query optimizers need to estimate the selectivity of conjunctive predicates when comparing alternative query execution plans. To this end, advanced optimizers use multivariate statistics to improve information about the joint distribution of attribute values in a table. The joint distribution for all columns is almost always too large to store completely, and the resulting use of partial distribution information raises the possibility that multiple, non-equivalent selectivity estimate ...

3 The BEA streaming XQuery processor

Daniela Florescu, Chris Hillery, Donald Kossmann, Paul Lucas, Fabio Riccardi, Till Westmann,

Terms used **query execution plan** and **derived constraint rule** Found **1** of **199,986**

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1 Efficient mid-query re-optimization of sub-optimal query execution plans

Navin Kabra, David J. DeWitt

June 1998 **ACM SIGMOD Record , Proceedings of the 1998 ACM SIGMOD international conference on Management of data SIGMOD '98**, Volume 27 Issue 2

Publisher: ACM Press

For a number of reasons, even the best query optimizers can very often produce sub-optimal query execution plans, leading to a significant degradation of performance. This is especially true in databases used for complex decision support queries and/or object-relational databases. In this paper, we describe an algorithm that detects sub-optimality of a query execution plan during query execution and attempts to correct the problem. The basic idea is to collect statistics at key points durin ...

Results 1 - 1 of 1

Terms used **query optimization** and **constraint rules** Found **1,092** of **199,986**

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1 Description logics for semantic query optimization in object-oriented database systems

Domenico Beneventano, Sonia Bergamaschi, Claudio Sartori

March 2003 **ACM Transactions on Database Systems (TODS)**, Volume 28 Issue 1

Publisher: ACM Press

Full text available: pdf(406.56 KB) Additional Information: full citation, abstract, references, citings, index terms

Semantic query optimization uses semantic knowledge (i.e., integrity constraints) to transform a query into an equivalent one that may be answered more efficiently. This article proposes a general method for semantic query optimization in the framework of Object-Oriented Database Systems. The method is effective for a large class of queries, including conjunctive recursive queries expressed with regular path expressions and is based on three ingredients. The first is a Description Logic, ODL

Keywords: Semantic query optimization, description logics, integrity constraints rules, query rewriting method, semantic expansion of a query, subsumption

2 Logic-based approach to semantic query optimization

Upen S. Chakravarthy, John Grant, Jack Minker

June 1990 **ACM Transactions on Database Systems (TODS)**, Volume 15 Issue 2

Publisher: ACM Press

Full text available: pdf(3.46 MB) Additional Information: full citation, abstract, references, citings, index terms

The purpose of semantic query optimization is to use semantic knowledge (e.g., integrity constraints) for transforming a query into a form that may be answered more efficiently than the original version. In several previous papers we described and proved the correctness of a method for semantic query optimization in deductive databases couched in first-order logic. This paper consolidates the major results of these papers emphasizing the techniques and their applicability for optimizing rel ...

3 Query optimization in XML structured-document databases

Dunren Che, Karl Aberer, Tamer Özsu

September 2006 **The VLDB Journal — The International Journal on Very Large Data Bases**, Volume 15 Issue 3

Publisher: Springer-Verlag New York, Inc.

Full text available: pdf(687.23 KB) Additional Information: full citation, abstract

Tue, 24 Apr 2007, 7:37:27 PM EST

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#2	((query optimization or query execution plan)<in>metadata) and ~~constraint rules~~
#3	(~~derived constraint rules~~<IN>metadata)
#4	(derived and constraint and rules<IN>metadata)
#5	(derived and constraint and rules<in>metadata) and query and execution and plans
#6	(derived and constraint and rules<in>metadata) and (qep or (query and optimization) or (query and execution and plans))
#7	(derived and constraint and rules<in>metadata) and (qep or (query and optimization) or (query and execution and plans))
#8	(derived and constraint and rules<in>metadata) and (qep or (query and optimization) or (query and execution and plans))
#9	8 and tables and columns and ((primary and foreign) and keys)
#10	((primary and foreign) and keys and contstraints<IN>metadata)
#11	(derived and constraint and rules<IN>metadata)
#12	(((derived and constraint and rules<in>metadata))<AND> (derived and constraint and rules<in>metadata) and query and execution and plan)

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